Office Action Summary	Application No.	Applicant(s)	
	10/657,278	LEE ET AL.	
	Examiner	Art Unit	
	DUNG LAM	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01/07/08*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) *2-22* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 23-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims **1, 23, 26 and 31** rejected under 35 U.S.C. 103(a) as being unpatentable over **McConnell** et al. (US Patent No. 6970719, hereinafter **McConnell**) in view of **Billstrom** (US Patent No. 5590133) further in view of **Stevens** (TCP/IP Illustrated Volume, p. 37-41).

2. Regarding **claim 1, McConnell** teaches a high-speed wireless data system for providing services for terminals of either a public wireless network or a private wireless network, the system (Fig. 6, 8 and 10) comprising:

- a first hub (**MSC 60**, Fig. 6) configured to relay data between a base station **62** in the private wireless network, a base station controller **68** in the private wireless network …, to receive a call connection request signal from a terminal through the base station (C20 L26-34), to transmit the call connection request signal of to the base station controller (C20 L41-50) when a destination address is associated with a database coupled with the first hub of the private network, to transmit the call connection request signal to a second hub (MSC 16, C21 L61-

64) when said destination address is not associated with the data coupled with the first hub.

- the second hub (**MSC 16**, Fig. 6) connected to a public base station, a public base station controller **20**, a private authentication system (Gateway SCP 70, C17 L50-56) while being connected to the first hub, the second hub receiving the call connection request signal of the terminal from the first hub, and transmitting the call connection request signal to the public network base station controller (C21 L61-67).
- the second hub (**MSC 16**, Fig. 6) connected to a public base station, a public base station controller **20**, the data location register (HLR , C17) while being connected to the first hub

However, **McConnell** does not teach a private authentication system and a public network packet data service node and the use of a destination address. In analogous art, **Billstrom** teaches a packet data service node (**PSDN**, Fig. 1, C7 L40-44) connected to a radio network. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine McConnell's teaching of routing between the public and private network to include Billstrom's PSDN because adding a PSDN would allow users to access a lot varieties of data type rather than just traditional voice.

However, **McConnell** and **Billstrom** do not teach the specifics of routing the call to the first hub on the basis of **a sever address included in** a Unicast-Access Terminal Identifier (UATI) assigned to the terminal ***or*** **in a destination address in association with the call connection request signal is the same as a sever address of the first**

hub and to route the call connection request signal to a second hub **when said sever address included in the Unicast Access Terminal Identifier (UATI) or in the destination address is not the same as said sever address of the first hub.** However, it is a well known concept of IP routing to use destination address to compare with the address of current router/hub device to route data internally and when the connection is destined for an external/public device, then the current hub/router would forward the connection to a second hub/gateway to go out to the external network.

In an analogous art, **Stevens** teaches the well known concept of IP routing of data to either the current host/router or to another external router. Figure 3.3 of **Stevens** shows that both Bsdi and Sun are on the same network segment/subnet. A source **Bsdi 140.252.13**.35 wants to send data to an internal/private destination address of **Sun 140.252.13**.33 (example at end of page 39), the bolded portions of the addresses show that the source and the destination both have the same subnet 140.252.13 and have the same serving hub/router address (See Fig. 3.6). As shown in fig. 3.3, when a packet destined for Sun which is directly connected to the local serving hub/router which means the destination address has the same router address as that of the current serving router/hub, the packet is routed by the local router/Ethernet device of subnet 140.252.13 (page 38-39, also item #1 in the middle of page 115). However, when Bsdi wants to send data to ftp.uu.net which is resolved/translated to a destination IP address of 192.48.96.9 which does not match with the address of the current router/hub or any host address or network entry in the routing table, then the data is forwarded to a (second hub) default router **Sun** which in turn forwards the data to an

external network segment till the packet reaches the destination (page 40, also item #3 in the middle of page 115). **Therefore**, it would have been obvious for one of ordinary skill in the art at the time of the invention to modified **McConnell**'s private and public communication system to include Billstrom's PSDN which uses Stevens's teaching of IP routing to route packets to either a current internal/private router and to a second/external/public router based on the comparison of the destination address with the serving hub/router. This modification would be more efficient because no paging of current location of the destination MS is required which reduces system resource usage. Furthermore, with IP routing, the size of the routing table is limited to thousands and not over populated to millions (paragraph before the example starts, page 39), thereby decreases the time in parsing the routing table and thus increase efficiency in routing.

3. Regarding **claim 23, McConnell** teaches a high-speed wireless data system for providing services for terminals of either a public wireless network or a private wireless network, the system (Fig. 6, 8 and 10) comprising:

- receiving, by the first hub ((MSC 60, Fig. 6), a call connection request signal from a terminal through a base station **62** in the private wireless network (C20 L26-34);
- to transmit the call connection request signal of to the base station controller (C20 L41-50) when a destination address is associated with a database coupled with the first hub of the private network,

- to transmit the call connection request signal to a second hub (MSC 16, C21 L61-64) when said destination address is not associated with the data coupled with the first hub.
- receiving, by the second hub (**MSC 16**, Fig. 6), the call connection request signal of the terminal from the first hub and transmitting the call connection request signal to the public network base station controller (C21 L61-67);
- wherein the first hub MSC 60 is configured to relay data between the base station, a base station controller, in the private wireless network (Fig. 6) and private authentication system (Gateway SCP 70, C17 L50-56) and the second hub (MSC 16, Fig. 6) connected to a public base station, a public base station controller, the data location register (HLR 32 connected to MSC 60 via STP, Fig. 6) while being connected to the first hub

However, **McConnell** does not teach a private authentication system and a public network packet data service node and the use of a destination address. In an analogous art, **Billstrom** teaches a public network packet data service node (**PSDN**, Fig. 1, C7 L40-44). **Therefore**, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine McConnell's teaching of routing between the public and a PSDN because the authentication system results in a **more secure** network and adding a PSDN would allow users to access a lot more types of data rather than just traditional voice.

However, **McConnell** and **Billstrom** do not teach the specifics of routing the call to the first hub on the basis of **a sever address included in** a Unicast-Access Terminal

Identifier (UATI) assigned to the terminal ***or*** **in a destination address in association with the call connection request signal is the same as a sever address of the first hub** and to route the call connection request signal to a second hub **when said sever address included in the Unicast Access Terminal Identifier (UATI) or in the destination address is not the same as said sever address of the first hub**

However, it is a well known concept of IP routing to use destination address to compare with the address of current router/hub device to route data internally and when the connection is destined for an external/public device, then the current hub/router would forward the connection to a second hub/gateway to go out to the external network.

In an analogous art, **Stevens** teaches the well known concept of IP routing of data to either the current host/router or to another external router. Figure 3.3 of **Stevens** shows that both Bsdi and Sun are on the same network segment/subnet. A source **Bsdi 140.252.13**.35 wants to send data to an internal/private destination address of **Sun 140.252.13**.33 (example at end of page 39), the bolded portions of the addresses show that the source and the destination both have the same subnet 140.252.13 and have the same serving hub/router address (See Fig. 3.6). As shown in fig. 3.3, when a packet destined for Sun which is directly connected to the local serving hub/router which means the destination address has the same router address as that of the current serving router/hub, the packet is routed by the local router/Ethernet device of subnet 140.252.13 (page 38-39, also item #1 in the middle of page 115). However, when Bsdi wants to send data to ftp.uu.net whose destination IP address is 192.48.96.9

which does not match with the address of the current router/hub or any host address or network entry in the routing table, then the data is forwarded to a (second hub) default router **Sun** which in turn forwards the data to an external network segment till the packet reaches the destination (page 40, also item #3 in the middle of page 115). **Therefore**, it would have been obvious for one of ordinary skill in the art at the time of the invention to modified **McConnell**'s private and public communication system to include Billstrom's PSDN which uses Stevens's teaching of IP routing to route packets to either a current internal/private router and to a second/external/public router based on the comparison of the destination address with the serving hub/router. This modification would be more efficient because no paging of current location of the destination MS is required which reduces system resource usage. Furthermore, with IP routing, the size of the routing table is limited to thousands and not over populated to millions (paragraph before the example starts, page 39), thereby decreases the time in parsing the routing table and thus increase efficiency in routing.

4. Regarding claim **26**, **McConnell, Billstrom and Stevens** teach the method according to claim 25, wherein: the private authentication system includes an authentication database for authenticating the terminal of the private wireless network (Billstrom, C6 L60-64); the data location register having service information of the public wireless network terminal (HLR 32) and information receives services from the private wireless network of the private wireless network terminal (); and the private packet data service node provides private wireless data services to the terminal of the private wireless network (**PSDN**, Fig. 1, C7 L40-44).

5. Regarding **claim 31**, **McConnell, Billstrom and Stevens** teach the system according to claim 27, wherein the private authentication system further includes a database for authentication of the terminal of the public wireless network (McConnell, HLR 32 contains user profiles).

6. Claims **24, 25 and 27-30** rejected under 35 U.S.C. 103(a) as being unpatentable over **McConnell** et al. (US Patent No. 6970719, hereinafter **McConnell**) in view of **Billstrom** (US Patent No. 5590133) further in view of **Stevens** (TCP/IP Illustrated Volume, p. 37-41) in view of Eyuboglue et al. (US Pub. 20020196749, hereinafter **Eyuboglu**).

7. Regarding claims **24 and 27**, **McConnell, Billstrom and Stevens** teach the system according to claim 1/24, wherein: McConnel each terminal is assigned of an ID (**McConnell** , C17 L39-43) the public wireless network and the private wireless network through a wireless channel, the private authentication system includes an authentication database for authenticating the terminal of the private wireless network (**McConnell,** Gateway SCP 70, C17 L50-56); the data location register having service information of the public wireless network terminal and information receives services from the private wireless network of the private wireless network terminal (**McConnell** HLR C18 L50-61); and the private packet data service node provides private wireless data services to the terminal of the private wireless network (Billstrom's PSDN), the base station controller performs different authentications for the terminals according to the public wireless network and the private wireless network to one of which each of the terminals belongs (C17 L40-46), management of a session for each of the terminals, call

connection and control of data transmitted to or received by each of the terminals (C20 L48-55);

However, the above references do not teach that the ID is in the form of a UATI and that the base station does the assigning. In an analogous art, **Eyuboglu** teaches an RNC (base station controller) assigning a UATI via a BS to MS ([0017, 49, 51]). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine McConnell, Billstrom and Stevens' teaching and **Eyuboglu** teaching's of a BSC/BS assigning the UATI to mobile stations in packet data network. Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention modify McConnell, Billstrom and Stevens' teaching to also include **Eyuboglu** teaching's of using UATI in order to route packets more efficiently.

8. Regarding **claims 28/25**, **McConnell, Billstrom, Stevens and Eyuboglu** teach the system according to claim 27/24, wherein the base station and the base station controller assign an IP address for performing an IP telecommunication, and process data and signaling for the assigned address (**Eyuboglu** [49, 51, 62, 64]).

9. Regarding **claims 29**, **McConnell, Billstrom, Stevens and Eyuboglu** the system according to claim 27, wherein, upon the terminal of the private wireless network also being used in the public wireless network, the data location register stores terminal information of both the private wireless network and the public wireless network in the terminal and assigns the UATI of the private wireless network to the terminal when the terminal is located within a range of a predetermined base station (**Eyuboglu** [0010, 26, 42]).

10. Regarding **claims 30, McConnell, Billstrom, Stevens and Eyuboglu** the system according to claim 27, wherein the data location register assigns the UATI of the private network to a corresponding terminal, when the terminal is located within a predetermined base station in a predetermined time zone (**Eyuboglu** [34]).

Response to Arguments

Applicant's arguments with respect to claims 1, 23-31 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DUNG LAM whose telephone number is (571) 272-6497. The examiner can normally be reached on M - F 9 - 5:30 pm, Every Other Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Harper can be reached on (571) 272-7605. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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